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Research Initiatives

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The overall classification of this briefing is:

~~TOP SECRET//SI//NOFORN~~

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(U) Importance of R&D

(U) Critical to Mission Execution

- ~~(TS//NF)~~ **Produce bold technological advances** unknown to the rest of the world – we can create anticipatory advantage over adversaries
- (U//~~FOUO~~) **Enhance Effectiveness and Efficiency** via rapid scaling/leveraging of newer technologies – we accelerate integration for mission use
- (U//~~FOUO~~) **Transition ideas, perspectives, and technologies** across government and outside NSA – we drive national change

(U) Strong NSA Commitment to Research

PL 86-36/50 USC 3605

EO 1.4.(c)
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(U) Exemplar Research Investment Priorities: 2-6 Years to Fruition

- (U//~~FOUO~~) Analytic Research
  - Predictive analytics/anticipatory intelligence
  - Privacy/compliance sensitive methods
- ~~(C//REL TO USA, FVEY)~~ Crypto Math
  - Maintain superiority in code making and code breaking

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(U) High Performance Computing

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- ~~(S//REL TO USA, FVEY)~~ Invest in, influence, and develop technologies [redacted]
- ~~(S//REL TO USA, FVEY)~~ Emphasis on cryptanalytic, data analytic, and cybersecurity outcomes

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(U//~~FOUO~~) Way Ahead

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- (U//~~FOUO~~) Fundamental Research (and Development) investments remain critical to the future of the IC.

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(U) Big Data Analysis

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(U) The Challenge

- (U) IC analysts need to address an increasingly skyrocketing volume and velocity of data in [redacted] languages and across a gamut of media.

(U) Research Approach

- (U) Enable Analysis
- (U) Create peta-scale data warehouses to store mission data coming in at increasing rates.
- (U) Create analytics to deal with data
  - Images & video
  - Speech & text
  - Geolocation data
  - Technical data (Tech SIGINT)
- (U) Create data correlation techniques to spot target behavior & emerging trends.
- (U) Create new approaches for visualizing complex information.

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(U) Research Impact on Mission: Examples

- (U) Early NSA Research work on large data warehouses pre-dated advances in commercial capabilities.
- [redacted]

(U) Projected Research Outcomes

[redacted]

Questions?